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IN THE

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1957.

No. 673.

MINNESOTA MINING AND MANUFACTURING COMPANY,
Petitioner,

vs.

SEARS ROEBUCK AND COMPANY and THE PLYMOUTH RUBBER COMPANY, INC.,
Respondents.

REPLY BRIEF

Of Petitioner in Support of Petition for Writ of Certiorari.

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Of Petitioner in Support of Petition for Writ of Certiorari.

On page 1 of their brief respondents deny that this is an appropriate case for certiorari. But contrary to respondents' assertion, there arise from this record:

1. A serious question of conflict between the decision of the Court of Appeals and applicable decisions of this Court; and

2. A new and doubtful question of law.

Matters of grave public interest and importance are raised by these questions.

On pages 1 and 2, respondents argue and assert (a) that the Court of Appeals made a finding "on a simple question of interpretation of a legal document"; (b) that the reversal of the District Court does not "constitute(s) a decision on a 'question of patent law'" (as if this Court's power in certiorari matters is limited to questions of patent law); and (c) that it "is indubitably clear to any reader

at all literate"[1] that the patent specification requires "two types of plasticizers", one liquid, one resinous.

Since each of these assertions, and others like them throughout respondents' brief, is directed to what the patent discloses and teaches, they can be answered jointly.

Respondents' oblique attack on the invention and the patent, which is beyond the issues properly raised, is discussed in an appendix, *infra*.

A. A CONFLICT OF DECISIONS ARISES.

1. The Specification Is Highly Technical, Contrary to Respondents' Argument.

The respondents plainly infer that the Court of Appeals, as a technical board of review, can determine what the patent discloses and teaches to the man skilled in the art without the aid of the testimony of such persons. Such principle may apply, for example, in the case of a simple invention such as a single piece collar button (**Krementz v. Cottle**, 148 U. S. 556); but it has no application to the instant case where questions of the functioning of plasticizers and the equivalence of substitutes present a complex and highly technical fact situation.

This is not a case of "simple question of interpretation of a legal document" (Br. p. 1). A patent is a contract only in the sense that it is a grant in consideration of a new and useful disclosure. Patents are not to be interpreted as agreements between private parties, but rather in the light of "what they actually say" to the man skilled in the art to whom they are addressed (35 U. S. C. 112). The Court of Appeals, in direct scorn of Rule 52 (a), ignored the findings of the District Court based upon the

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[1] This statement is a direct insult to the District Court, who is both literate and experienced; and is a charge of incompetency and insincerity against the Patent Office, petitioner's counsel, and its witnesses.

testimony of those who know whereof they speak, men skilled in the art.

In so doing the Court of Appeals rendered a decision in direct conflict with decisions of this Court. In **Seymour v. Osborne,** 11 Wall. 516, 546, the Supreme Court said that "the testimony of scientific witnesses is indispensable."

Respondents cite at page 7 one of the very cases with which the Court of Appeals is in conflict on the question of necessity of expert testimony, namely, **U. S. Industrial Chemicals, Inc., v. Carbide & Carbon Chemicals Corp.,** 315 U. S. 668 (Petition, p. 13). In this case it is said to be "permissible, and often necessary," for the court "to receive expert evidence to ascertain the meaning of a technical or scientific term or term of art so that the court may be aided in understanding not what the instruments mean but **what they actually say**" (315 U. S. 678, emphasis added), i. e., what they teach or say to the man skilled in the art.

Having determined with the aid of expert evidence what an instrument **says**, the determination of the meaning as a matter of law is not then difficult.

Far from the "simple question of interpretation of a legal document" (Br. p. 1), the question of what the Oace patent teaches is technical and not understandable to the lay mind. Respondents themselves exhibit in their brief the difficulty the lay mind encounters, for four pages (5-9) of the brief and five pages of the Appendix (10-14) are devoted to a discussion of the patent and the evidence from their partisan point of view. The discussion proves petitioner's contention that the patent is technical. Respondents' discussion also proves the wisdom of the Supreme Court decisions that "the testimony of scientific witnesses is indispensable to a correct understanding."

The highly technical nature of the Oace patent and of this case is demonstrated by the many complex and technical background questions necessarily considered and re-

solved by the District Court as an aid to the interpretation of the Oace disclosure and in support of its ultimate finding of infringement, including the following importantly significant facts:

1. That in the process of polymerization, the nature and composition of the resultant product depends on controllable factors, as time, temperature, pressure, etc. (Finding 39, App. 50).

2. That Rohm & Haas "tailor-make" the polymerized resinous plasticizers for end uses, so that "they combine to a remarkable degree" the features both of liquid ester plasticizers and resinous plasticizers (Finding 40, App. 51), providing a tailored **hybrid**. The quoted language is from a Rohm & Haas publication (Deft. Ex. 42, R. II, 188).

3. That in 1954 Rohm & Haas announced to the public that it "**focused** their efforts on **tailoring** plasticizers to meet **specific**, often stringent, application and process requirements", referring at the same time to the "**very critical**" requirements of the vinyl electrical tape here involved (Deft's. Ex. 50, R. II, 189-190, emphasis added). It was in this year of 1954 that G-25 was first used by respondents as the sole plasticizer in commercial tape making. Respondent's expert Danovitch could not make tape with G-25 as the sole plasticizer in 1948-50 (R. II, 114).

4. That the whole of G-25 and of G 40 is liquid (Finding 41, App. 51).

5. That the more-liquid, lower-molecular-weight portion of each of the G-25 and G-40 used by respondents is a liquid ester plasticizer, as required by the claims (Findings 43, 51, App. 51, 53).

6. That sebacic (from G-25) and adipyl (from G-40) and phthalyl esters are each liquid and the equivalent of each other as plasticizers (Finding 44, App. 51).

7. That in the process of making G-25 and G-40 the unit building material of a molecular weight of 300-350 is not

removed (Finding 48, App. 52). Hence the statement of respondents, on page 4, that all the molecules of polymerized plasticizers "are varying **high** molecular weights" is plainly wrong, on the testimony of a Rohm & Haas witness (Dr. Beavers, R. II, 123-4). The number average molecular weight of G-25 is 8000; of G-40, 6000 (App. 35).

8. That G-25 has changed significantly since the patentees worked with it in 1944 and 1945 (Finding 49A-49H, App. 52-53).

9. That plasticizing is a physical not chemical, phenomenon (R. II, 26, 95).

10. That the plasticizers can be blended at any time one chooses (DeBell, R. II, 90).

2. The "Necessary" and "Indispensable" Testimony of the Experts Is That the Patent Discloses the Use of a Resinous Plasticizer as the Sole Plasticizer—Contrary to Respondents' Argument.

The respondents assert (Br. p. 7) that only one witness said the patent taught the use of a resinous plasticizer used solely. This is error:

(a) Tierney so testified specifically (R. II, 45, 15-16), as respondents admit (Br. p. 7).

(b) Oace so testified. On interrogation by respondents' counsel, as to whether he found in his "patent any suggestion that the use of some liquid plasticizer in the mix is or may be optional," Oace testified in the affirmative, saying (R. II, 140), referring to column 5, lines 21-26:

> "Well, now, I think to a laboratory man that would mean that the liquid plasticizer may be eliminated."

(c) Lundquist so averred in an affidavit in the Patent Office on the reissue application (R. II, 146-147).

(d) DeBell so testified; although respondent denies this (Br. p. 7). Interrogated about that portion of the

specification to which Oace referred (column 5, line 21 et seq.) which states that ethyl acrylate polymer "has somewhat less tendency to cause tack loss" than G-25 and "hence may be used in even greater amounts" than resin such as G-25 of that vintage, DeBell first protested, as respondent asserts (Br. 7), that the patent "has already taught me that alone the ethyl acrylate polymer does cause loss of tack" (R. II, 91).

But as the interrogation continued DeBell made these significant admissions (R. II, 92):

> "Q. And would you try 100 to 1 ratio of ethyl acrylate polymer to DOP? Would that be a fairly normal thing to do in running some of those simple tests? A. Yes.
>
> Q. Now if you still observed no tack loss there, wouldn't that suggest to you to go that other short step and forget the DOP entirely? A. Oh, I think so."

With these admissions on the part of DeBell, coupled with the showing that the Oace tape can be made with ethyl acrylate polymer as the sole plasticizer (Tierney Exh. 14; R. II, 15, 16) and coupled with the testimony of other witnesses, the trial court was clearly correct in its Finding 31 (App. 49) that

> "The patent discloses a plasticizing system which is satisfied by one or more ingredients of plasticizing material"

and that

> "The patent in suit teaches persons skilled in the art that ethyl acrylate polymer may be used as the plasticizer for the film backing of the tape of the patent."

Even if it be conceded arguendo that DeBell does not think, contrary to the clear import of his testimony, that the patent teaches the use of an all-resinous plasticizer (ethyl acrylate polymer) other witnesses so testified; the

District Court believed them; and so found (Finding 31, App. 49). Also the Patent Office earlier so found (see infra), which the District Court also considered. But, contrary to Rule 52 (a), the Court of Appeals tossed the District Court's finding aside.

3. In Granting the Reissue the Patent Office Determined That the Patent Did Not Require Two Plasticizers—Contrary to Respondents' Argument.

The Patent Office granted the reissue claims not requiring two plasticizers on an **unchanged** disclosure (Finding 32, App. 49-50). This action involved the necessary determination that the specification made such disclosure, contrary to respondents' assertions on pages 2 and 8 of their brief.

In the prosecution of the reissue application, Oace et al. said to the Patent Office (R. II, 145-146):

> "Suppose one attempted to evade the Oace et al. patent No. 2,559,990 by replacing the two plasticizers for the backing, specified in the original patent claims, by a single plasticizer which could combine the function and effect of the two named plasticizers. Would this avoid infringement?
>
> * * * * * * *
>
> ". . . 'It is obvious' that the functions of the two plasticizers could be combined into one (by appropriate application of the knowledge of chemistry) in duplicating applicants' novel electrical insulating tape.
>
> "Thus it is submitted that the new claims as a whole are not much, if any, broader in scope than the claims of the original patent, **when the doctrine of equivalents is properly applied** in determining what will infringe the latter claims. Of course, it always helps in a patent suit to have the matter of range of equivalency argued out in the Patent Office, where possible, so that the claims are **in terms** covering the devices or structures

charged as an infringement. That is one purpose of this reissue application."

Thus, the Patent Office was fully on notice of the actual and intended meaning of the reissue claims, having been told exactly what the patentees wanted, and why.

The respondents state that the reissue has "broadened" claims (Br. p. 12). They are broader **in terms** in respect to the plasticizer; but not materially broader in view of the nature of the invention claimed, viz., a stretchable and retractable pressure-sensitive vinyl plastic insulating tape. The Board of Appeals of the Patent Office held that reissue claim 6 (claim 16 of the reissue application) is "of substantially the same scope as were claims 1 to 5 inclusive allowed in the original patent" (R. II, 153). The grant of the reissue was a determination of claim support in the Oace specification for both the original and the reissue claims.

Summary of Point A.

In summary, to this point, it is reiterated that the Court of Appeals, contrary to the mandate of Rule 52 (a), overruled the concurring findings, as to what the Oace patent teaches, of the Board of Appeals of the Patent office, and of the District Court. In so doing that Court, as judges unskilled in the art, substituted their own inexpert reading of the patent for that of the experts.

This unwarranted action was in clear conflict with (a) the decisions of this Court which hold "necessary" and "indispensable" expert assistance to the inexpert[2] and (b) the decisions of this Court applying Rule 52 (a).[3]

This conflict with two established principles of law is of serious public importance. It is of grave concern to the smooth, equal and integrated administration of justice in the Federal Courts.

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[2] See cases cited at pages 12-14 of Petition.

[3] See particularly *Graver v. Linde*, 339 U. S. 605, and other cases cited at pages 17-18 of Petition.

Contrary to respondents' argument (Br. 2), Question 1 of the petition is clearly raised on this record.

B. A NEW AND DOUBTFUL QUESTION OF LAW ARISES.

Beginning at page 8 of their brief, and continuing on page 9, respondents disclaim that the issue of whether an equivalent must have been known at the time of the application, or of the grant, is here involved. Petitioner is accused of trying to "inject" this issue.

Respondents injected the issue in their brief in the Court of Appeals (p. 29), referring "to the basic principle of equivalency as the substitution of 'another old ingredient for one of the ingredients of the patented combination * * * well known at the date of the patent' * * *."

The Court of Appeals referred to the issue of known equivalents in its first opinion (App. 36):

> "It may be that the lower weight molecules in the resinous plasticizers perform the function which the patent attributes to the liquid plasticizers in making the finished product with the result that both parties in the pending case now[4] find that G-25 or G-40 may be used as the only plasticizer; **but it is certain that the inventors were unaware of this fact** and maintained the contrary positions." (Emphasis added.)

At the argument to reopen, the Court of Appeals itself raised the question as to known equivalents.

In its second opinion, the Court of Appeals cited cases **pro** and **con** (App. 41).

Obviously, if, as petitioner contends and as the District Court found, the patent teaches the use of an all-resinous plasticizer, infringement of the original claims exists on

[4] But the G-25 of the time of the suit was not the G-25 that Pace et al. worked with in 1944-45; nor was it the G-25 that respondents' expert Danovitch could not use alone in 1948-50.

the basis of equivalents, **unless it is required that an equivalent must have been known at the date of grant.**

This case cannot be finally resolved without a determination of the legal question as to **when** an equivalent must have been known.

The patent bar has long waited for an answer to the question of "known equivalents" from a positive source. The statutory recognition of equivalents in the 1952 Act makes a definitive determination essential. Courts of appeal are in conflict on the question; and even differ as to what this Court has held (See Pet., pp. 20-21). This question alone furnishes an adequate basis for the allowance of the writ. This Court has not, but should, decide the question.

Actually, the generic, basic question in this case involves equivalents, for that question is:

> Shall a patent which provided a new article of commerce so unique and useful that it was hailed by General Electric as "revolutionary" (App. 48) be rendered valueless because by tailored polymerization there is produced a single plasticizer which will work alone to replace, and to provide the function and effect of, the two plasticizers preferred by the patentees?

in pronouncing such a result, the Court of Appeals has nullified the aim of the Patent Laws—to promote the progress of the useful arts.

The writ should be allowed.

Respectfully submitted,

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January 17, 1958.

APPENDIX.

Respondents indulge in a sly attack on the invention and validity of the patent (Br. 3, 14), implying that all Oace did was to use old vintage G-25 for its intended purpose, casually citing this Court's decision in **Sinclair & Carroll v. Interchemical Corp.**, 325 U. S. 327. To the contrary, the record shows that the inventors spent many months in experimental work, during the course of which over 200 experiments were conducted with a large number of different formulations (R. II, 6-7; Finding 27, R. I, A6).

This innuendo is strangely out of tune with respondents' acknowledgment to the District Court at the beginning of the trial (R. II, 2):

> "I won't discuss the validity of this original patent. They (Oace et al.) did a very good technical job in putting these plasticizers together, and getting an excellent product. . . . I don't know why they weren't able to use G-25 satisfactorily, whether their technique was wrong. We always had a lot of trouble with it, or what happened. They weren't able to."

The tardy argument presented here by respondents also ignores Findings 24-30 (R. I, A5-A7) and General Electric's appraisal, as testified to by the witness Parker (R. II, 62):

> "For the first time in fifty years a revolutionary electrical tape is on the market . . ."

The District Court found that the "patent in suit exhibits invention of a high order" (Finding 24); also see generally Findings 19 to 29 (R. I, A4-A7).

Even the Court of Appeals recognized that—

> "* * * the patent was a great improvement over prior insulating devices and met with much commercial success" (App. 25).

When respondent Plymouth set out, in 1948, to make the accused tape, it admittedly had before it some of petitioner's "Scotch" Brand No. 33 tape and a publication of Bakelite Corp. showing "the physical and electrical properties of the pressure-sensitive, stretchable and retractable vinyl plastic tape sold commercially as 'Scotch' Brand Electrical Tape" (see Admissions, R. II, 160). Even so, respondent succeeded in making no substantial amount of tape until after the original Oace patent issued (July 10, 1951). "In 1950 and 1951, Plymouth's output was so small it did not bother to get the figures" (App. 48).

* * * * * * *

Respondent states or implies (Br. 4) that prior to G-25 (1943) there was no commercially available resinous plasticizer suitable for use in making the Oace tape. This is inaccurate.

Another resinous plasticizer which is like the 1945 vintage Paraplex G-25 in requiring some DOP or equivalent to be usable in making the Oace tape is Paraplex G-20, available commercially from Rohm & Haas since 1929 (R. II, 38). A roll of tape made with G-20 and DOP is in evidence as Tierney Exhibit 28. The similarity of G-20 to the early G-25 was acknowledged by Louis Klein of Rohm & Haas: pages 69-72 of Philadelphia depositions. Both are "polyester resins which are based on long-chain polybasic acid esterified with polyhydric alcohols such as glycol, for example" (Phila. Dep. p. 72).

Also ethyl acrylate polymer, disclosed in the patent, was *per se* old. A roll of tape made with ethyl acrylate polymer as the sole plasticizer is in evidence as Tierney Exhibit 14 (R. II, 15-16, 74).